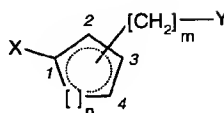


We claim:

1. A compound of the following formula:



Formula I

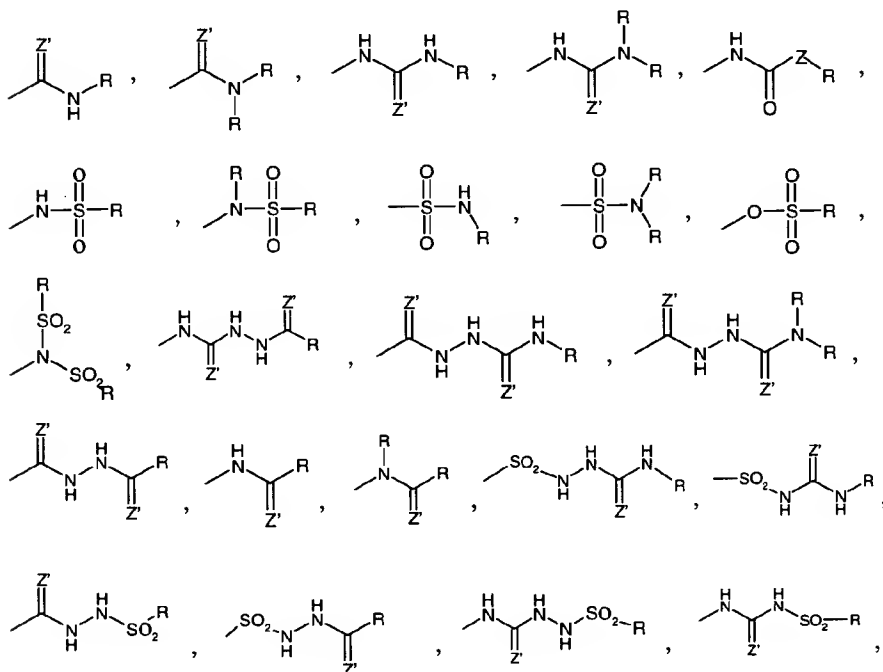
and pharmaceutically acceptable derivatives thereof;

wherein n is 1 or 2, forming a central 5-6 membered carbocyclic ring which is optionally saturated, partially saturated, or aromatic;

m is 0-3;

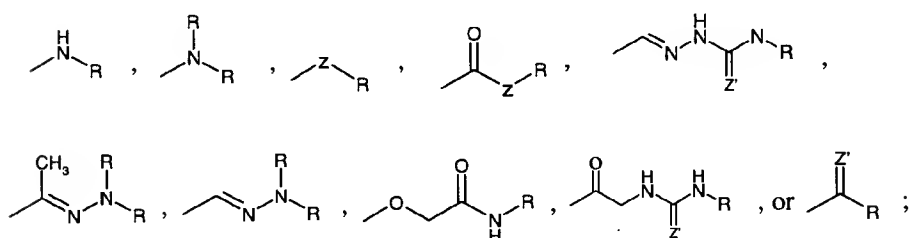
the substituent  $-\text{[CH}_2\text{]}_m-\text{Y}$  is attached to said central carbocyclic ring at position 2, 3, or 4;

X and Y are the same or different, and may independently be:



or a combination thereof,  
or C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, alkenyl, or alkynyl; said  
alkyl, alkenyl or alkynyl being substituted at one or several  
positions with Q, and optionally substituted at one or several  
positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z' is O, S, N(CN), CH(NO<sub>2</sub>), or N(NO<sub>2</sub>);

Z is O or S; and

R may independently be:

Q,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain lower alkyl, alkenyl or  
alkynyl which is substituted at one or several positions with  
Q, and which further may optionally be substituted in one or  
several positions by hydroxyl, mercaptyl, or carbonyl  
oxygen, and wherein one or more of the carbon atoms are  
optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

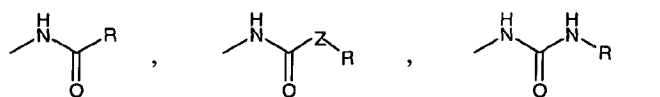
and wherein Q, which is optionally saturated,  
partially saturated, or aromatic, is a mono-, bi-, or  
tricyclic, carbo- or heterocyclic ring, which is  
optionally and independently substituted in one or  
several positions with a substituent selected from the  
group consisting of halo; hydroxyl; mercaptyl; nitro;  
trifluoromethyl; aminocarbonyl; arylaminocarbonyl

which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxycarbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group consisting of O, N, and S in any chemically stable order and oxidation state;

provided that:

when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and n is 2, and m is 0, and

Y is attached to said central carbocyclic ring at position 3; then X and Y are not both

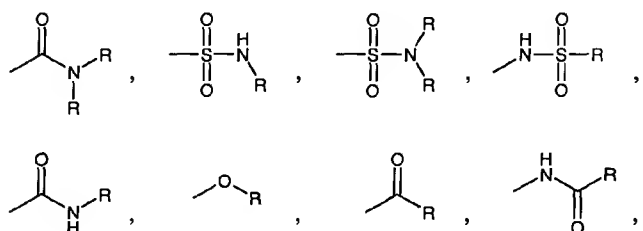


or a combination thereof;

and further provided that:

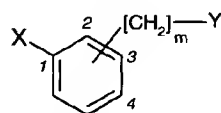
when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and n is 2, and m is 0, and Y is attached to said central carbocyclic ring at position 3, and said carbocyclic ring is aromatic;

then X and Y are not both:



or a combination thereof.

2. A compound of the following formula:



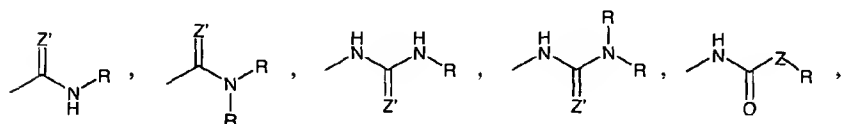
Formula II

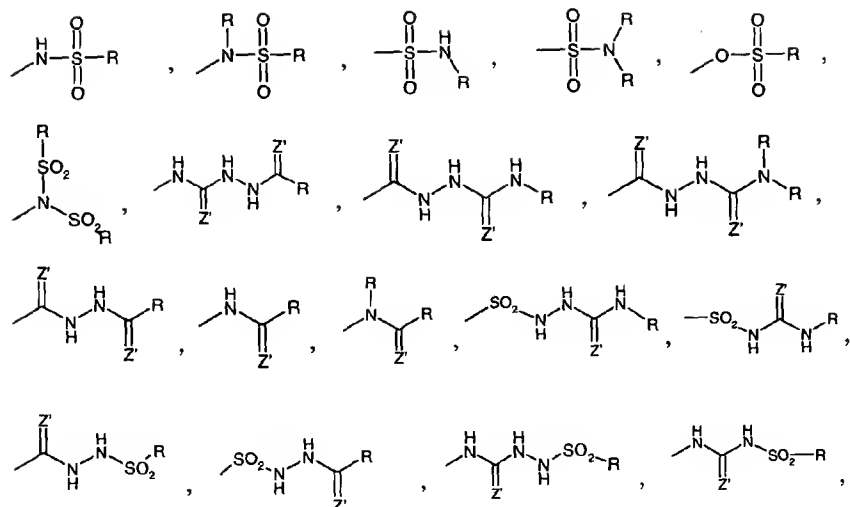
and pharmaceutically acceptable derivatives thereof;

wherein m is 0-3;

the substituent  $-(\text{CH}_2)_m-\text{Y}$  is attached at position 2, or 3;

X and Y are the same or different, and may independently be:

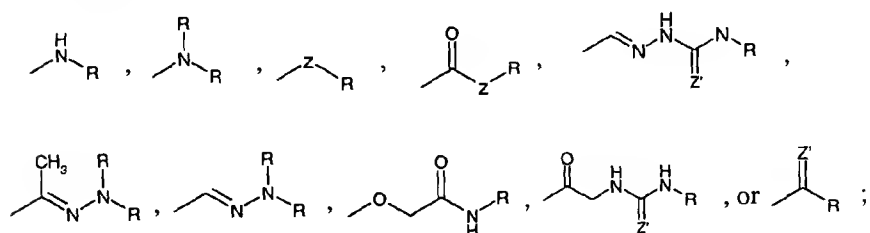




or a combination thereof,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, alkenyl, or alkynyl; said alkyl, alkenyl or alkynyl being substituted at one or several positions with Q, and optionally substituted at one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z' is O, S, N(CN), CH(NO<sub>2</sub>), or N(NO<sub>2</sub>);

Z is O or S; and

R may independently be:

Q,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

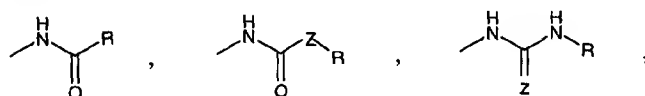
and wherein Q, which is optionally saturated, partially saturated, or aromatic, is a mono-, bi-, or tricyclic, carbo- or heterocyclic ring, which is optionally and independently substituted in one or several positions with a substituent selected from the group consisting of halo; mercaptyl; nitro; trifluoromethyl; aminocarbonyl; arylaminocarbonyl which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxy carbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group consisting of O, N, and S in any chemically stable order and oxidation state;

provided that:

when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and m is 0, and

Y is attached at position 3;

then X and Y are not both



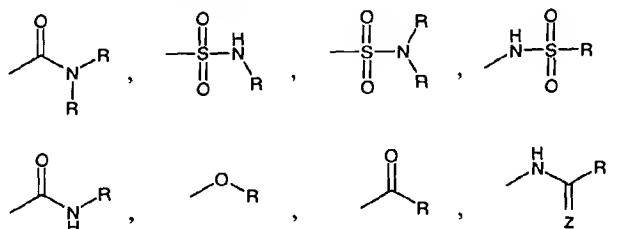
or a combination thereof;

and further provided that:

when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and m is 0, and

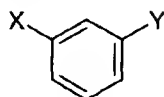
Y is attached at position 3,

then X and Y are not both:



or a combination thereof.

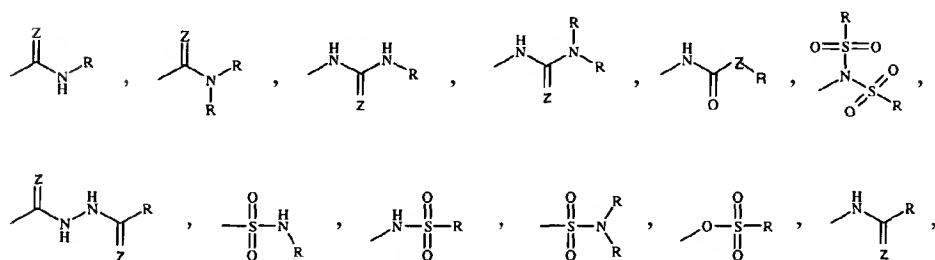
3. A compound of the following formula:



Formula IIa

and pharmaceutically acceptable derivatives thereof;

where X and Y are the same or different, and may independently be:



or a combination thereof,

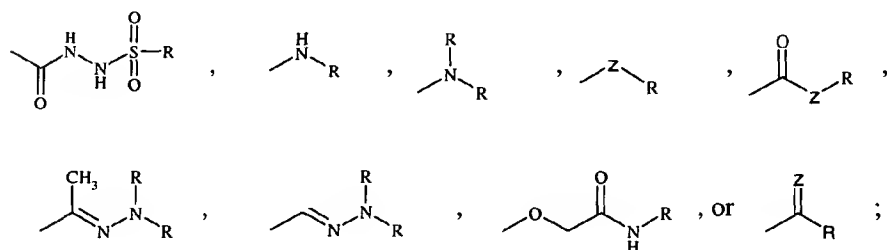
or C1-C6 straight or branched chain lower alkyl, alkenyl, or alkynyl

which is substituted at one or several positions with Q, and which

further may optionally be substituted at one or several positions by

hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z is O or S, and

R may independently be:

Q,



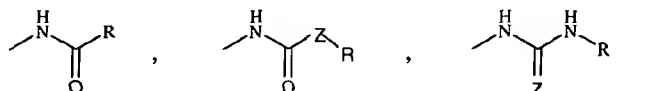
or C1-C6 straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

and wherein Q is a mono-, bi- or tricyclic carbo- or heterocyclic ring which is optionally saturated, partially saturated, or aromatic, and which may optionally be substituted in one or several positions with halo, hydroxyl, mercaptyl, nitro, cyano, trifluoromethyl, C1-C6 straight or branched chain alkyl or -alkenyl, C1-C4 alkoxy or -alkenyloxy, phenoxy, benzyloxy, amino, or acetyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms selected from the group consisting of O, N, S, or a combination thereof;

provided that:

when R is Q, or Q-substituted C1-C6 straight or branched chain alkyl or alkenyl, or Q-substituted C1-C6 straight or branched chain alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups,

then X and Y are not both

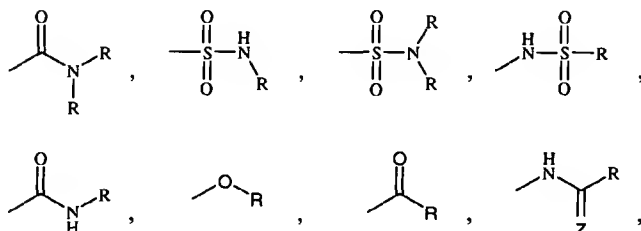


or a combination thereof;

and further provided that:

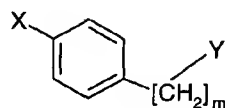
when R is Q, or Q-substituted C1-C6 straight or branched chain alkyl or alkenyl, or Q-substituted C1-C6 straight or branched

chain alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, then X and Y are not both:



or a combination thereof.

4. A compound of the following formula:

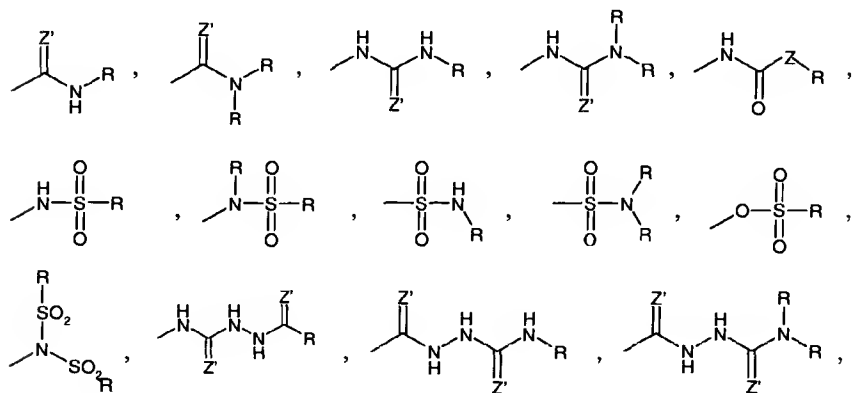


Formula III

and pharmaceutically acceptable derivatives thereof;

wherein m is 0-3;

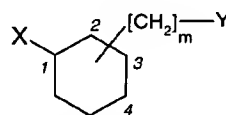
X and Y are the same or different, and may independently be:





and wherein Q, which is optionally saturated, partially saturated, or aromatic, is a mono-, bi-, or tricyclic, carbo- or heterocyclic ring, which is optionally and independently substituted in one or several positions with a substituent selected from the group consisting of halo; hydroxyl; mercaptyl; trifluoromethyl; aminocarbonyl; arylaminocarbonyl which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxy carbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group consisting of O, N, and S in any chemically stable order and oxidation state.

5. A compound of the following formula:

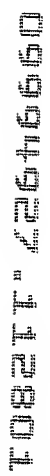


Formula IV

and pharmaceutically acceptable derivatives thereof;  
wherein Y is attached at position 2, 3, or 4;  
m is 0-3;

0994927 112301

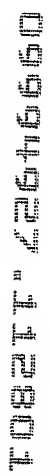
0994927 112301



0994927 112301

0994927 112301

0994927 112301



wherein Z' is O, S, N(CN), CH(NO<sub>2</sub>), or N(NO<sub>2</sub>);

Z is O or S; and

R may independently be:

Q,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

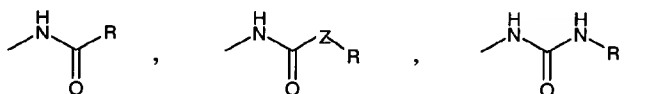
and wherein Q, which is optionally saturated, partially saturated, or aromatic, is a mono-, bi-, or tricyclic, carbo- or heterocyclic ring, which is optionally and independently substituted in one or several positions with a substituent selected from the group consisting of halo; hydroxyl; mercaptyl; nitro; trifluoromethyl; aminocarbonyl; arylaminocarbonyl which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxycarbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group

consisting of O, N, and S in any chemically stable order and oxidation state;

provided that:

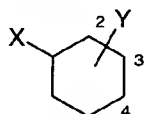
when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and m is 0, and Y is attached at position 3;

then X and Y are not both



or a combination thereof.

6. A compound of the following formula:

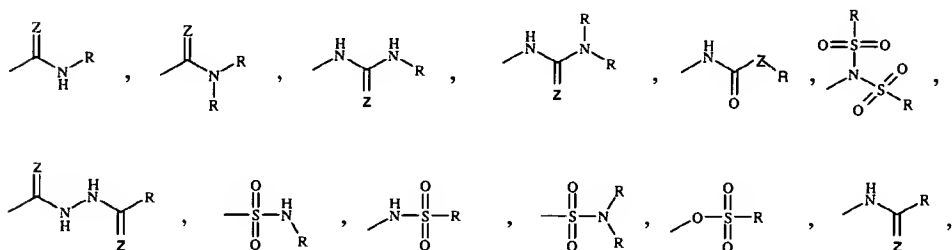


*Formula IVa*

and pharmaceutically acceptable derivatives thereof;

wherein Y is attached at position 2, 3, or 4;

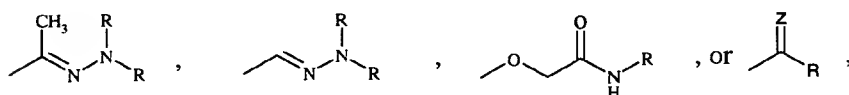
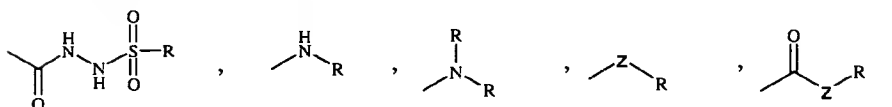
where X and Y are the same or different, and may independently be:



or a combination thereof,

or C1-C6 straight or branched chain lower alkyl, alkenyl, or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted at one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z is O or S, and

R may independently be:

Q,

or C1-C6 straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

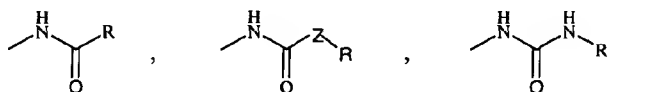
and wherein Q is a mono-, bi- or tricyclic carbo- or heterocyclic ring which is optionally saturated, partially saturated, or aromatic, and which may optionally be substituted in one or several positions with halo, hydroxyl, mercaptyl, nitro, cyano, trifluoromethyl, C1-C6 straight or branched chain alkyl or -alkenyl, C1-C4 alkoxy or -alkenyloxy, phenoxy, benzyloxy, amino, or acetyl, and wherein



the individual ring sizes are 5-6 members, and  
wherein each heterocyclic ring contains 1-6  
heteroatoms selected from the group consisting of O,  
N, S, or a combination thereof;

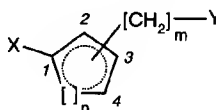
provided that:

when R is Q, or Q-substituted C1-C6 straight or branched chain  
alkyl or alkenyl, or Q-substituted C1-C6 straight or branched chain  
alkyl or alkenyl which is additionally substituted with one or more  
hydroxyl- or oxo-groups,  
and Y is attached at position 3,  
then X and Y are not both



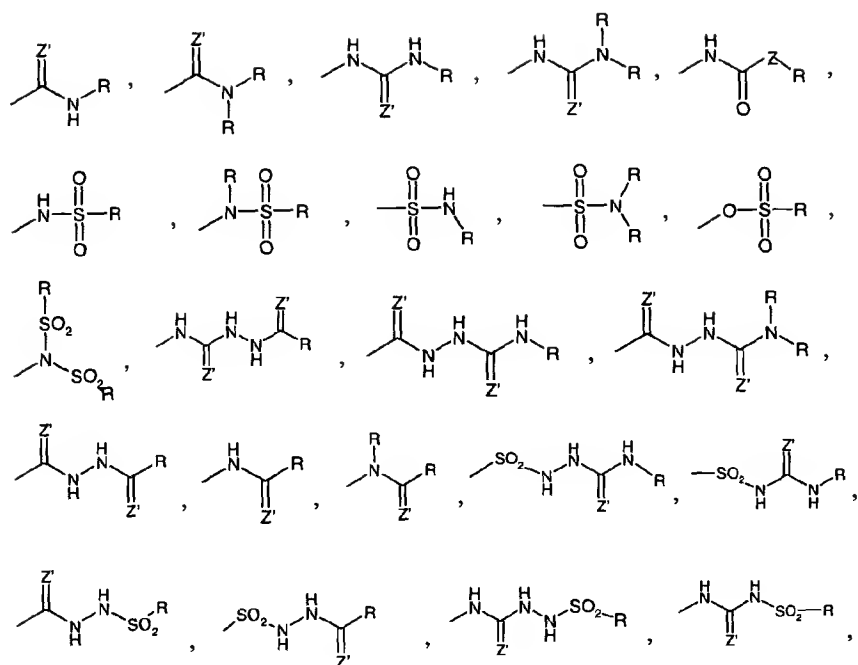
or a combination thereof.

7. A compound of the following formula:



*Formula V*

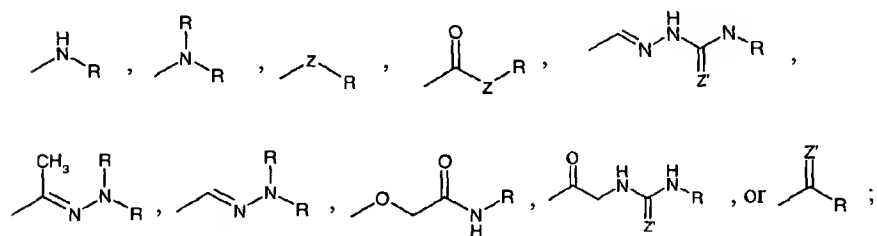
and pharmaceutically acceptable derivatives thereof;  
wherein n is 1, forming a central 5-membered carbocyclic ring which is  
saturated or partially saturated;  
m is 0-3;  
the substituent  $\text{---}[\text{CH}_2]_m\text{---Y}$  is attached to said central carbocyclic ring at  
position 2, 3, or 4;  
X and Y are the same or different, and may independently be:



or a combination thereof,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain alkyl, alkenyl, or alkynyl; said alkyl, alkenyl or alkynyl being substituted at one or several positions with Q, and optionally substituted at one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z' is O, S, N(CN), CH(NO<sub>2</sub>), or N(NO<sub>2</sub>);

Z is O or S; and

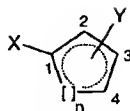
R may independently be:

Q,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

and wherein Q, which is optionally saturated, partially saturated, or aromatic, is a mono-, bi-, or tricyclic, carbo- or heterocyclic ring, which is optionally and independently substituted in one or several positions with a substituent selected from the group consisting of halo; hydroxyl; mercaptyl; nitro; trifluoromethyl; aminocarbonyl; arylaminocarbonyl which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxy carbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group consisting of O, N, and S in any chemically stable order and oxidation state;

8. A compound of the following formula:



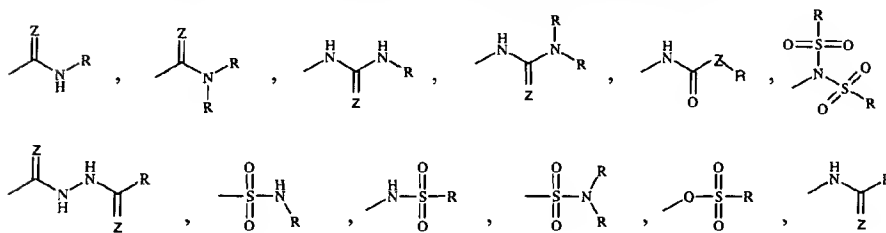
Formula Va

and pharmaceutically acceptable derivatives thereof;

where n is 1, forming a central 5-membered carbocyclic ring which is saturated or partially saturated;

Y is attached to said central carbocyclic ring at position 2, 3, or 4;

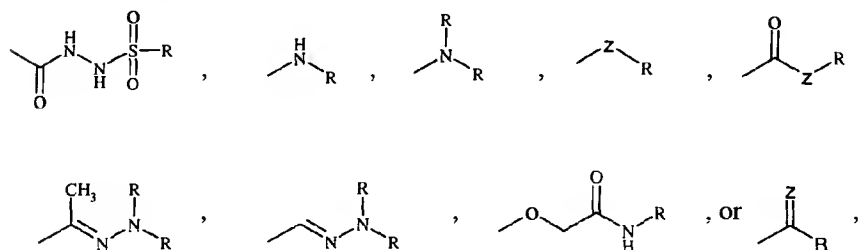
X and Y are the same or different, and may independently be:



or a combination thereof,

or C1-C6 straight or branched chain lower alkyl, alkenyl, or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted at one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z is O or S, and

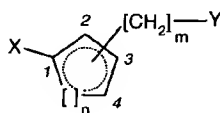
R may independently be:

Q,

or C1-C6 straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

and wherein Q is a mono-, bi- or tricyclic carbo- or heterocyclic ring which is optionally saturated, partially saturated, or aromatic, and which may optionally be substituted in one or several positions with halo, hydroxyl, mercaptyl, nitro, cyano, trifluoromethyl, C1-C6 straight or branched chain alkyl or -alkenyl, C1-C4 alkoxy or -alkenyloxy, phenoxy, benzyloxy, amino, or acetyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms selected from the group consisting of O, N, S, or a combination thereof.

9. A compound of the following formula:



Formula VI

and pharmaceutically acceptable derivatives thereof;

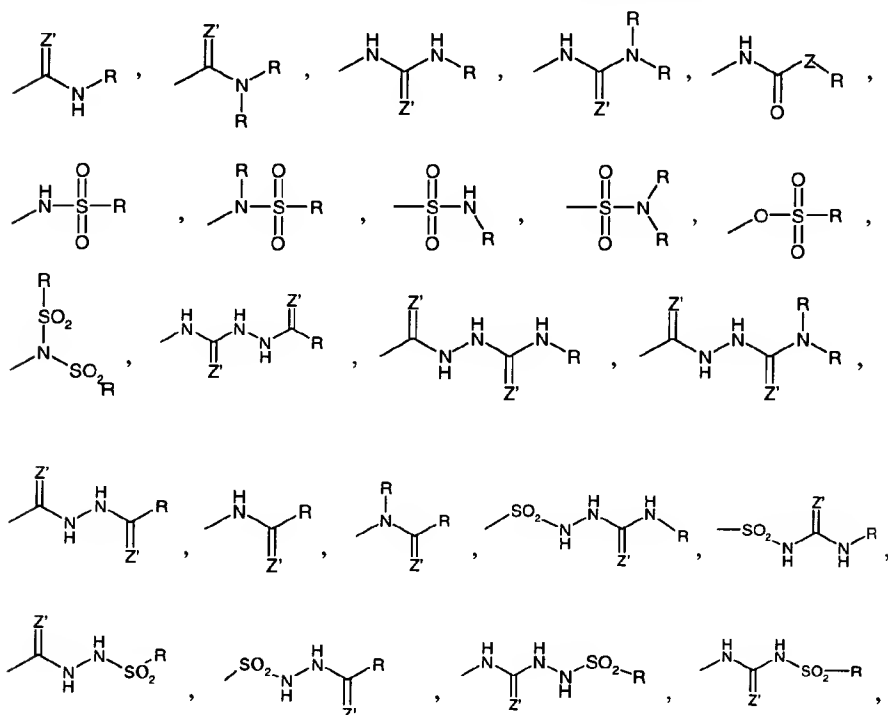


wherein n is 2, forming a central 6 membered carbocyclic ring which is saturated or partially saturated;

m is 0-3;

the substituent  $-\text{[CH}_2\text{]}_m-\text{Y}$  is attached to said central carbocyclic ring at position 2, 3, or 4;

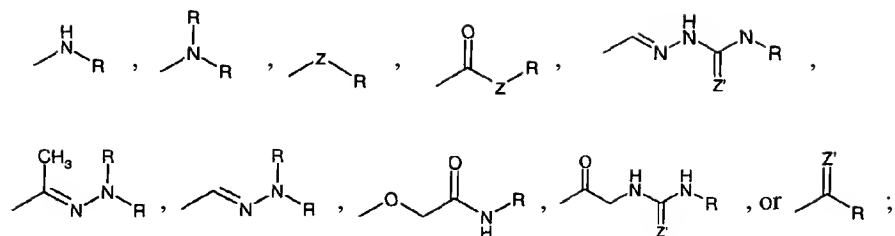
X and Y are the same or different, and may independently be:



or a combination thereof,

or  $\text{C}_1\text{-C}_6$  straight or branched chain alkyl, alkenyl, or alkynyl; said alkyl, alkenyl or alkynyl being substituted at one or several positions with Q, and optionally substituted at one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen;

and where Y may further be: Q,



wherein Z' is O, S, N(CN), CH(NO<sub>2</sub>), or N(NO<sub>2</sub>);

Z is O or S; and

R may independently be:

Q,

or C<sub>1</sub>-C<sub>6</sub> straight or branched chain lower alkyl, alkenyl or alkynyl which is substituted at one or several positions with Q, and which further may optionally be substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen, and wherein one or more of the carbon atoms are optionally replaced with O, N, NH, S, SO, or SO<sub>2</sub>;

and wherein Q, which is optionally saturated, partially saturated, or aromatic, is a mono-, bi-, or tricyclic, carbo- or heterocyclic ring, which is optionally and independently substituted in one or several positions with a substituent selected from the group consisting of halo; hydroxyl; mercaptyl; nitro; trifluoromethyl; aminocarbonyl; arylaminocarbonyl which is optionally halogenated and optionally substituted with trifluoromethyl or cyano; arylamino which is optionally halogenated; C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl; C<sub>1</sub>-C<sub>4</sub> alkylthio; C<sub>1</sub>-C<sub>4</sub> alkanoyl; oxo; cyano; carboxy; C<sub>1</sub> - C<sub>6</sub> alkyl or alkenyl; C<sub>1</sub> - C<sub>4</sub> alkoxy; C<sub>1</sub>-C<sub>5</sub> alkoxy carbonyl; C<sub>1</sub> - C<sub>4</sub> alkenyloxy; phenoxy; phenyl; cyanophenyl; benzyloxy; benzyl; amino; C<sub>1</sub>-

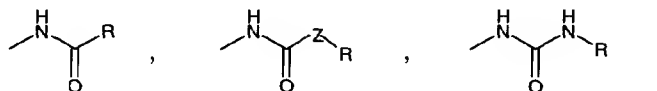
C<sub>4</sub> alkylamino; di-(C<sub>1</sub>-C<sub>4</sub>) alkylamino; C<sub>1</sub>-C<sub>4</sub> alkylcarbamoyl; and di(C<sub>1</sub>-C<sub>4</sub>)alkylcarbamoyl, and wherein the individual ring sizes are 5-6 members, and wherein each heterocyclic ring contains 1-6 heteroatoms independently selected from the group consisting of O, N, and S in any chemically stable order and oxidation state;

provided that:

when R is Q, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl, or Q-substituted C<sub>1</sub>-C<sub>6</sub> alkyl or alkenyl which is additionally substituted with one or more hydroxyl- or oxo-groups, and m is 0, and

Y is attached to said central carbocyclic ring at position 3;

then X and Y are not both



or a combination thereof;

and further provided that:

when R is Q, or methyl monosubstituted with Q, and m is 0, and

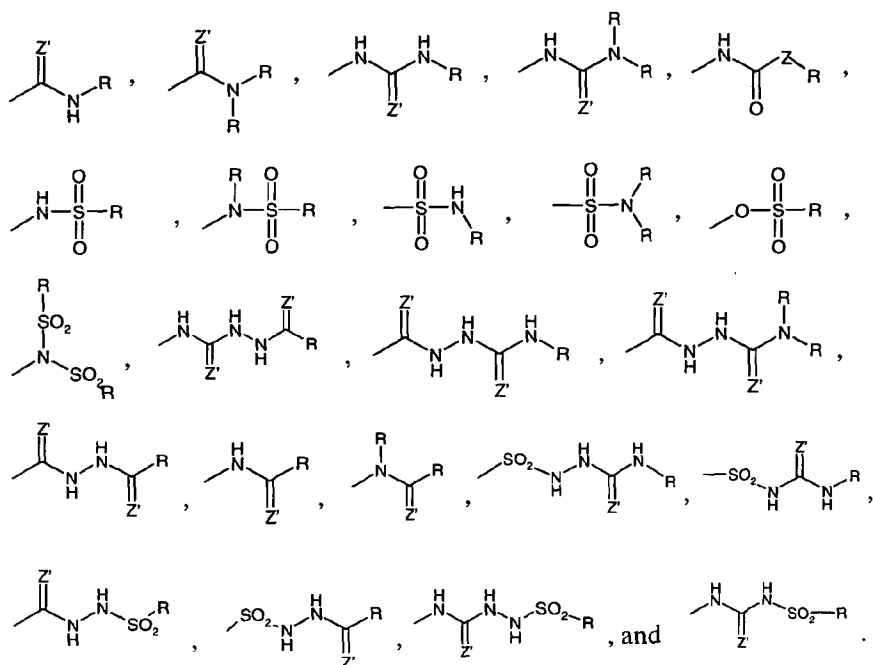
Y is attached to said 6-membered carbocyclic ring at

position 2, and said carbocyclic ring is partially saturated,

then X and Y are not both  $\text{---(CO)---NH---R}$ .

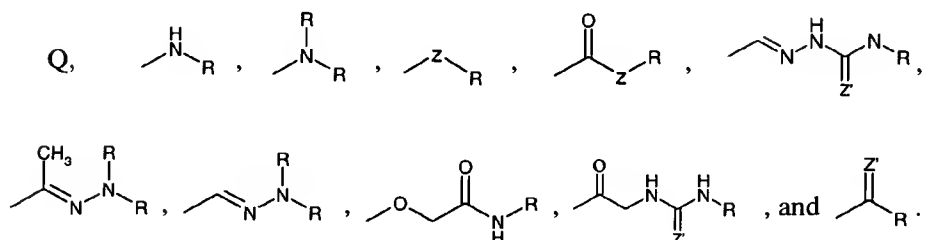


10. The compound according to any one of claims 1, 2, 4, 7, or 9, wherein X and Y are independently selected from the group consisting of

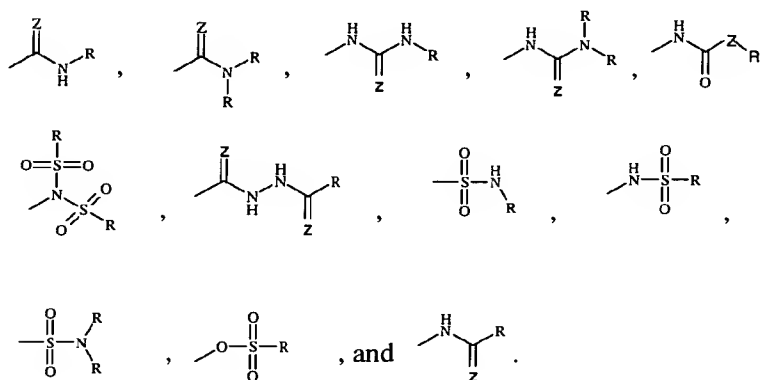


11. The compound according to claim 10, wherein R in one of X or Y is Q.
12. The compound according to claim 10, wherein R in one of X or Y is Q-substituted  $\text{C}_1\text{-C}_6$  straight or branched chain lower alkyl, alkenyl or alkynyl, which is optionally substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen.

13. The compound according to any one of claims 1, 2, 5, 7, or 9, wherein Y is selected from the group consisting of

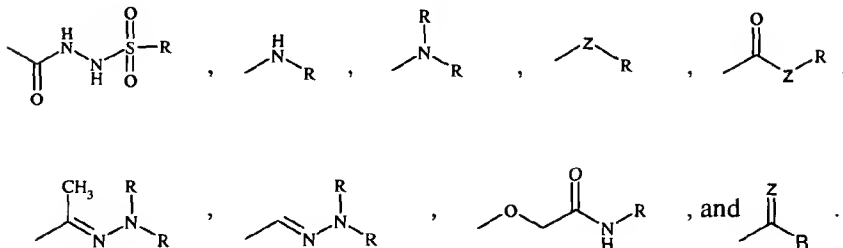


14. The compound according to any one of claims 3, 6, or 8, wherein X and Y are independently selected from the group consisting of:



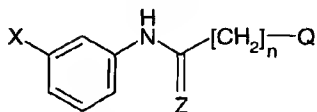
15. The compound of claim 14, wherein R in one of X or Y is Q.
16. The compound of claim 14, wherein R in one of X or Y is Q-substituted  $\text{C}_1$ - $\text{C}_6$  straight or branched chain lower alkyl, alkenyl or alkynyl, which is optionally substituted in one or several positions by hydroxyl, mercaptyl, or carbonyl oxygen.

17. The compound according to any one of claims 3, 6, or 8, wherein Y is selected from the group consisting of Q,



18. The compound according to claim 5, wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached in a *cis*-configuration.
19. The compound according to claim 5 wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached in a *trans*-configuration.
20. The compound according to claim 6 wherein X and Y are attached in a *cis*-configuration.
21. The compound according to claim 6, wherein X and Y are attached in a *trans*-configuration.
22. The compound according to claim 7, wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached to said central carbocyclic ring in a *cis*-configuration.
23. The compound according to claim 7, wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached to said central carbocyclic ring in a *trans*-configuration.
24. The compound according to claim 8, wherein X and Y are attached to said central carbocyclic ring in a *cis*-configuration.

25. The compound according to claim 8, wherein X and Y are attached to said central carbocyclic ring in a *trans*-configuration.
26. The compound according to claim 9, wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached to said central carbocyclic ring in a *cis*-configuration.
27. The compound according to claim 9, wherein X and the substituent  $-\text{[CH}_2\text{]}_m\text{-Y}$  are attached to said central carbocyclic ring in a *cis*-configuration.
28. A compound of the following formula:



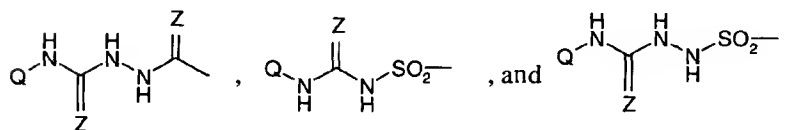
Formula VII

and pharmaceutically acceptable derivatives thereof;

wherein Z is O or S;

n is 2 – 6;

X is selected from the group consisting of



and Q is a 5-6-membered carbo- or heterocyclic ring, which is optionally saturated, partially saturated, or aromatic, and wherein each of one or several heteroatoms, if present, is independently selected from

the group consisting of O, N, and S, and wherein Q is optionally substituted at one or several positions with halo or trifluoromethyl.

29. A compound selected from the group consisting of:
- Compound 1: [(3,5-dichlorophenyl)amino]-N-(3-[(4-methoxyphenyl)sulfonyl][(4-methylphenyl)sulfonyl]amino}phenyl)formamide;
- Compound 2: [(3,5-dichlorophenyl)amino]-N-(3-{bis[(4-methylphenyl)sulfonyl]amino}phenyl)formamide;
- Compound 3: (3,5-dichlorophenyl)-N-(3-[(4-methoxyphenyl)sulfonyl][(4-methylphenyl)sulfonyl]amino}phenyl)formamide;
- Compound 4: (3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)[(4-methoxyphenyl)sulfonyl][(4-methylphenyl)sulfonyl]amine;
- Compound 5: bis[(3,5-dichlorophenyl)sulfonyl](3-{[(naphthylamino)thioxomethyl]amino}phenyl)amine;
- Compound 6: N-(3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)[(2,6-dichlorophenyl)amino]formamide;
- Compound 7: N-(3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)[(3,5-dichlorophenyl)amino]formamide;
- Compound 8: (3,5-dichlorophenyl)-N-{3-[bis(2-naphthylsulfonyl)amino]phenyl}formamide;
- Compound 8a: N-(3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)(3,5-dichlorophenyl)formamide;
- Compound 9: (3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)bis(2-naphthylsulfonyl)amine;
- Compound 10: (3-{bis[(3,5-dichlorophenyl)sulfonyl]amino}phenyl)bis[(4-methoxyphenyl)sulfonyl]amine;
- Compound 11: (naphthylamino)[(2-{[(naphthylamino)thioxomethyl]amino}cyclohexyl)amino]methane-1-thione;
- Compound 12: {[3,5-bis(trifluoromethyl)phenyl]amino}((2-([3,5-bis(trifluoromethyl)phenyl]amino)thioxomethyl)amino)cyclohexyl)amino)methane-1-thione;

- Compound 13: [(4-iodophenyl)amino]{[2-({[(4-iodophenyl)amino]thioxomethyl}amino)cyclohexyl]amino}methane-1-thione;
- Compound 14: [(3,4-dichlorophenyl)amino]{[2-({[(3,4-dichlorophenyl)amino]thioxomethylamino)cyclohexyl]amino}methane-1-thione;
- Compound 15: [(3,5-dichlorophenyl)amino]{[2-({[(3,5-dichlorophenyl)amino]thioxomethyl}amino)cyclohexyl]amino}methane-1-thione;
- Compound 15a: cis-[(3,5-dichlorophenyl)amino]-N-(2-{[(3,5-dichlorophenyl)amino]carbonylamino}cyclohexyl)formamide;
- Compound 16: cis-[(3,5-dichlorophenyl)amino]-N-(4-{[(3,5-dichlorophenyl)amino]carbonylamino}cyclohexyl)formamide;
- Compounds 17 and 19: N-(3,5-dichlorophenyl)[3-({[(3,5-dichlorophenyl)amino]thioxomethyl}amino)cyclopentyl]formamide;
- Compound 18: (1S,3R)-N-(3,5-dichlorophenyl)[4-({[(3,5-dichlorophenyl)amino]thioxomethyl}amino)cyclopent-2-enyl]formamide;
- Compound 20: [(3,5-dichlorophenyl)amino]({3-[2,2-bis(4-chlorophenyl)vinyl]phenyl}amino)methane-1-thione;
- Compound 21: ({3-[2-aza-2-(diphenylamino)vinyl]phenyl}amino)[(3,5-dichlorophenyl)amino]methane-1-thione;
- Compound 22: 3-({[(3,5-dichlorophenyl)amino]thioxomethyl}amino)phenyl 2,3,4,5,6-pentafluorobenzenesulfonate;
- Compound 23: 1-{3-[3,5-Bis(trifluoromethyl)benzyloxy]phenyl}-5-(3,5-dichlorophenyl)-1,4-dioxo-2,3,5-triazapentane;
- Compound 24: N-(3,5-dichlorophenyl)-2-{3-[(3,5-dichlorophenyl)carbonylamino]phenoxy}ethanamide;
- Compound 25: 3-[(3,5-dichlorophenyl)carbonylamino]phenyl 2,3,4,5,6-pentafluorobenzenesulfonate;
- Compound 26: {[3,5-bis(trifluoromethyl)phenyl]amino}-N-(3-phenoxyphenyl)formamide;
- Compound 27: [(3,5-dichlorophenyl)amino]-N-(2-{[(3,5-dichlorophenyl)amino]carbonylamino}phenyl)formamide;

Compound 28: [(3,5-dichlorophenyl)amino]{[2-({[(3,5-dichlorophenyl) amino]thioxomethyl} amino)phenyl]amino} methane-1-thione;

Compound 29: (4-iodophenyl)-N-{2-[(4-iodophenyl)carbonylamino] phenyl} formamide;

Compound 30: 1-{3-[(3-Benzoyloxy)phenylcarboxamido]benzoyl}-2-(3,5-dichlorobenzoyl)hydrazine;

Compound 31: 1-{3-[(3-Benzoyloxy)phenylcarboxamido]benzoyl}-2-(3,4-dichlorobenzenesulfonyl)hydrazine;

Compound 32: 1-{[1-Aza-2-oxo-7-(3-trifluoromethylphenyl)]heptyl}-3-{[5-(3,4-dichlorophenyl)-1-oxo-2,3,5-triaza-4-thio]pentyl} benzene;

Compound 33: 1-{3-[(5-Phenyl)valeroylamino]benzoyl}-4-(3,4-dichlorophenyl)thiosemicarbazide;

Compound 34A: 1-[3-(6-Phenylpentanoylamino)-benzenesulfonyl]-3-(3,4-dichlorophenyl)thiourea;

Compound 34B: 1-[3-(6-Phenylpentanoylamino)-benzenesulfonyl]-3-(3,4-dichlorophenyl)urea;

Compound 35: 1-[3-(6-Phenylpentanoylamino)-benzenesulfonyl]-4-(3,4-dichlorophenyl) thiosemicarbazide;

Compound 36: L-N-[3-(6-Phenylhexanoylamino)benzoyl]proline 3,4-dichlorobenzamide;

Compound 37: 1-{3-[(7-Phenyl)heptanoylamino]benzoyl}-4-(3,4-dichlorophenyl) thiosemicarbazide;

Compound 38: 1-{[1-Aza-2-oxo-6-(thien-2-yl)]hexyl}-3-{[5-(3,4-dichlorophenyl)-1-oxo-2,3,5-triaza-4-thio]pentyl} benzene;

Compound 39: N-{3-[(1E)-2-aza-2-({[(3,4-dichlorophenyl)amino] thioxomethyl} amino)vinyl] phenyl}-5-phenylpentanamide;

Compound 40A: 5-Phenyl-pentanoic acid {3-[5-(3,4-dichlorophenylamino)-[1,3,4]thiadiazol-2-yl]-phenyl}-amide;

Compound 40B: 5-Phenyl-pentanoic acid {3-[5-(3,4-dichlorophenylamino)-[1,3,4]oxadiazol-2-yl]-phenyl}-amide;

Compound 41: 1-[(6-Phenyl-1-aza-2-oxo)hexyl]-3-[[adamant-1-yl]-1-oxo-2,3,5-triaza-4-thio]pentyl}-benzene;

Compound 42: 1-[(6-Phenyl-1-aza-2-oxo)hexyl]-3-[[5-(3,4-dichlorophenyl)-1,5-diaza-2,4-oxo]pentyl]-benzene;

Compound 43: 1-{4-[(5-Phenyl)pentanoylamino]benzoyl}-4-(3,4-dichlorophenyl) thiosemicarbazide;

Compound 44: N-{3-[3-(3,5-Dichloro-phenyl)-sulfonyl-ureido]-phenyl}-Di(3,5-dichloro-benzenesulfonamide); and

Compound 45: 1-{3-[6-(3-trifluoromethylphenyl)hexanoylamino]-benzenesulfonyl}-3-(3,4-dichlorophenyl)thiourea.

30. A pharmaceutical composition, comprising:  
(i.) a compound of Formula II of claim 2; and  
(ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
31. A pharmaceutical composition, comprising:  
(i.) a compound of Formula IIa of claim 3; and  
(ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
32. A pharmaceutical composition, comprising:  
(i.) a compound of Formula III of claim 4; and  
(ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
33. A pharmaceutical composition, comprising:  
(i.) a compound of Formula IV of claim 5; and  
(ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
34. A pharmaceutical composition, comprising:  
(i.) a compound of Formula IVa of claim 6; and  
(ii.) a pharmaceutically acceptable carrier, diluent, or excipient.



35. A pharmaceutical composition, comprising:
  - (i.) a compound of Formula V of claim 7; and
  - (ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
36. A pharmaceutical composition, comprising:
  - (i.) a compound of Formula Va of claim 8; and
  - (ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
37. A pharmaceutical composition, comprising:
  - (i.) a compound of Formula VI of claim 9; and
  - (ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
38. A pharmaceutical composition, comprising:
  - (i.) a compound of Formula VII of claim 28; and
  - (ii.) a pharmaceutically acceptable carrier, diluent, or excipient.
39. A pharmaceutical composition, comprising:
  - (i.) a compound of Formula I of claim 1,
  - (ii.) a pharmaceutically acceptable carrier, diluent, or excipient; and
  - (iii.) an additional agent selected from the group consisting of hair growth-promoting agents, hair loss-retarding agents, antibiotic agents, antidandruff agents, anti-inflammatory agents, pediculicides, antipruriginous agents, anaesthetic agents, keratolytic agents, antiseborrhoeic agents, antiacne agents, and hair dyes.
40. The pharmaceutical composition according to any one of claims 30 – 38, further comprising an additional agent selected from the group consisting of hair growth-promoting agents, hair loss-retarding agents, antibiotic agents, antidandruff agents, anti-inflammatory agents, pediculicides, antipruriginous agents, anaesthetic agents, keratolytic agents, antiseborrhoeic agents, antiacne agents, and hair dyes.

41. A method of using a compound to bind a cyclophilin-type immunophilin protein, comprising contacting the compound with a cyclophilin-type immunophilin, wherein the compound is of Formula I as defined in claim 1.
42. The method of claim 41, wherein contacting the compound with a cyclophilin-type immunophilin occurs *in vivo*.
43. The method of claim 41, wherein contacting the compound with a cyclophilin-type immunophilin occurs *in vitro*.
44. The method of claim 42, wherein contacting the compound with a cyclophilin-type immunophilin occurs after administration to an animal.
45. The method of claim 50, wherein the animal is human.
46. The method of claim 43, wherein contacting the compound with a cyclophilin-type immunophilin occurs within a cell.
47. The method of claim 43, wherein contacting the compound with a cyclophilin-type immunophilin occurs in a cell-free preparation.
48. A complex of a compound of Formula I of claim 1, and a cyclophilin-type immunophilin.
49. The complex of claim 48, wherein the cyclophilin-type immunophilin is human.

50. A method of using a compound of Formula II of claim 2, comprising administering a pharmaceutically effective amount of the compound to an animal.
51. The method of claim 50, wherein the animal is diagnosed with, is predisposed to, or is suspected of having a neurological disorder.
52. A method of treating a neurological disorder in a patient, comprising administering to said patient a therapeutically effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof, wherein the neurological disorder is a neurodegenerative disorder; neuropathic disorder; neurovascular disorder; traumatic injury of the brain, spinal cord, or peripheral nervous system; demyelinating disease of the central or peripheral nervous system; metabolic or hereditary metabolic disorder of the central or peripheral nervous system; or toxin-induced- or nutritionally related disorder of the central or peripheral nervous system.
53. The method of claim 52, wherein the neurodegenerative disorder is Parkinson's disease, Alzheimer's disease, amyotrophic lateral sclerosis (ALS), Huntington's disease, cerebellar ataxia, or multisystem atrophy.
54. The method of claim 52, wherein the demyelinating disease is multiple sclerosis, Guillain-Barré syndrome, or chronic inflammatory demyelinating polyradiculoneuropathy.
55. The method of claim 52, wherein the neurovascular disorder is global cerebral ischemia, spinal cord ischemia, ischemic stroke, cardiogenic cerebral embolism, hemorrhagic stroke, lacunar infarction, or a multiple infarct syndrome.

56. The method of claim 52, wherein the traumatic injury of the central or peripheral nervous system is concussion injury; contusion injury; diffuse axonal injury; edema; hematoma associated with craniocerebral or spinal trauma; axonal or nerve sheath damage associated with laceration, compression, stretch, or avulsion of peripheral nerves or plexi; or neural tissue damage caused during surgery.
57. The method of claim 56 wherein the surgery is prostate surgery, and the neural tissue damage is to the major pelvic ganglion or to the cavernous nerve.
58. The method of claim 52, wherein the neuropathic disorder is diabetic neuropathy, uremic neuropathy, neuropathy related to drug therapy, or neuropathy associated with viral infection.
59. The method of claim 52, wherein the metabolic disorder is status epilepticus, hypoglycemic coma, or Wilson's disease.
60. A method of preventing a neurological disorder, comprising administering to an animal a pharmaceutically effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
61. A method of stimulating hair growth, preventing hair loss, or retarding hair loss in a mammal, comprising administering to said mammal an effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
62. The method of claim 61, wherein said mammal is undergoing therapy with a cancer chemotherapeutic agent.

63. The method of claim 62, wherein said cancer chemotherapeutic agent is cisplatin, carboplatin, cyclophosphamide, dactinomycin, etoposide, hexamethamelamine, ifosfamide, taxol, vincristine, bleomycin, or 5-fluorouracil.
64. The method of claim 61, wherein said mammal is undergoing radiation therapy.
65. The method of claim 61, wherein said mammal is suffering from alopecia areata, androgenetic alopecia/male pattern baldness, anagen effluvium, trichotillomania, traction alopecia, or telogen effluvium.
66. The method of claim 61, wherein said mammal is undergoing therapy with methotrexate, nonsteroidal anti-inflammatory drugs, or beta blockers.
67. A method of blocking the permeability transition pore in mitochondria, comprising contacting said mitochondria with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
68. A method of inhibiting breakdown of mitochondrial metabolism in cells which undergo oxidative stress, comprising contacting said cells with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
69. A method of preventing or delaying cell death in a cell subjected to calcium overload, comprising contacting said cell with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof

70. A method of preventing, mitigating, or delaying excitotoxic or hypoglycemic injury to cells, tissues, or organs, comprising contacting said cells, tissues, or organs with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
71. A method of inhibiting breakdown of energy metabolism and cell death of mammalian cells following physiological induction of programmed cell death, comprising contacting said cells with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
72. A method of preventing or delaying death of cultured cells in large scale or commercial scale cell culture, comprising contacting said cells with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
73. A method of treating or preventing ischemic injury or ischemia/reperfusion injury in a mammal, comprising administering to said mammal an effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
74. The method of claim 73, wherein said ischemic injury or ischemia/reperfusion injury is mesenteric infarction, bowel ischemia, hepatic infarction, renal infarction, splenic infarction, or ischemic heart disease.
75. The method of claim 74, wherein said ischemic heart disease is congestive heart failure, myocardial ischemia, or coronary heart disease.

76. A method of treating an ophthalmic disorder in a mammal, comprising administering to said mammal a therapeutically effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
77. The method of claim 76, wherein said ophthalmic disorder is glaucoma, ischemic retinopathy, vascular retinopathy, or degeneration of the photoreceptor cell layer.
78. A method of treating Reye's syndrome in a patient, comprising administering to said patient a therapeutically effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
79. A method of preventing or reducing tissue damage of organs used in organ transplantation surgery, comprising contacting said organs with a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
80. A method of treating an infection or infestation with pathogenic protozoan or helminthic parasites, comprising contacting said parasites with a compound of Formula I of claim 1.
81. A method of treating an infection with pathogenic protozoan or helminthic parasites in an animal, comprising administering to said animal a therapeutically effective amount of a compound of Formula I of claim 1, or with a pharmaceutically acceptable derivative thereof.
82. The method of claim 81, wherein said infection is malaria, river blindness, lymphatic filariasis, intestinal roundworm infection,

tapeworm infection, pinworm infection, toxoplasmosis, leishmaniasis, trypanosomiasis, or bilharzia.

83. A method for treating a virus infection in a mammal, comprising administering to said mammal a therapeutically effective amount of a compound of Formula I of claim 1, or of a pharmaceutically acceptable derivative thereof.
84. The method of claim 83, wherein said virus is a human immunodeficiency virus.

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